

Amendment to the Claims

The following listing of claims will replace all prior versions and listings of claims in the application:

- 1-31. (canceled)
32. A method of preventing an infection caused by bacteria from a *Neisseria* genus in a human in need thereof, comprising administering to the human an effective amount of a recombinant protein comprising an amino acid sequence set forth in SEQ ID NO.: 4.
33. The method according to claim 32, wherein the bacteria is *Neisseria meningitidis*.
34. The method according to claim 32, wherein the bacteria is *Neisseria gonorrhoeae*.
35. A method of preventing an infection caused by bacteria from a *Neisseria* genus in a human in need thereof, comprising administering to the human an effective amount of a pharmaceutical composition comprising a recombinant protein, wherein the protein comprises an amino acid sequence set forth in SEQ ID NO: 4 and a pharmaceutically acceptable carrier.
36. The method according to claim 35, wherein the pharmaceutical composition further comprises a polysaccharide antigen.
37. The method according to claim 36, wherein the polysaccharide antigen is a capsular polysaccharide of *Neisseria meningitidis*.
38. The method according to claim 35, wherein the pharmaceutical composition further comprises a bacterial polysaccharide-protein conjugate, wherein said protein comprises an amino acid sequence set forth in SEQ ID NO: 4.
39. The method according to claim 35, wherein the pharmaceutical composition further comprises an inactivated microorganism.
40. The method according to claim 35, wherein the pharmaceutical composition further comprises a peptide antigen.
41. The method according to claim 35, wherein the pharmaceutical composition further comprises a hormone.

42. The method according to claim 35, wherein the pharmaceutical composition further comprises a growth factor.
43. The method according to claim 35, wherein the pharmaceutical composition is administered parenterally.
44. The method according to claim 35, wherein the pharmaceutical composition is administered mucosally.
45. The method according to claim 35, wherein the pharmaceutical composition is administered orally.
46. A method of treating an infection caused by bacteria from a *Neisseria* genus in a human in need thereof, comprising administering to the human an effective amount of a recombinant protein comprising an amino acid sequence set forth in SEQ ID NO: 4.